

distribution of the one or more fluorescent reporter molecules between cytoplasm and cell membrane in the individual cells.

14. (NEW) The method of claim 13 further comprising contacting the cells with a test compound, and wherein the changes indicate a test compound-induced change in the distribution of the one or more fluorescent reporter molecules between the cytoplasm and the cell membrane in the individual cells.

15. (NEW) The method of claim 13 wherein the fluorescent reporter molecule is selected from the group consisting of fluorescently labeled proteins, fluorescently labeled antibodies, and chimeric proteins comprising green fluorescent protein coupled to a protein of interest.

16. (NEW) The method of claim 13 wherein the one or more features is selected from the group consisting of intensity and location.

17. (NEW) The method of claim 16 wherein the one or more fluorescent reporter molecules comprise at least a first fluorescent reporter molecule that identifies individual cells and at least a second fluorescent reporter molecule that reports on a cellular protein of interest.

18. (NEW) The method of claim 17 wherein the at least first fluorescent reporter molecule identifies cell nuclei.

19. (NEW) The method of claim 17 wherein the imaging of the at least first fluorescent reporter molecule is carried out at a different wavelength than the imaging of the at least second fluorescent reporter molecule.

20. (NEW) The method of claim 17 wherein the imaging comprises:

i) acquiring fluorescent signals in a field from the at least first fluorescent reporter molecule at a first wavelength to identify individual cells in the field; and

ii) automatically acquiring fluorescent signals from the at least second fluorescent reporter molecule at a second wavelength in a field containing individual cells.

21. (NEW) The method of claim 13 wherein the cellular protein of interest comprises a protein selected from the group consisting of a GTP binding protein and a protein tyrosine kinase.

22. (NEW) The method of claim 21 wherein the cellular protein of interest is a GTP binding protein.

23. (NEW) The method of claim 22 wherein the GTP binding protein is a Rho protein.

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